



Testimonials

IN FAVOR OF

MR. ROBERT BELL, C.E., F.G.S.,

OF THE

GEOLOGICAL SURVEY OF CANADA,

AS A CANDIDATE

FOR THE

CHAIR OF NATURAL HISTORY

IN

UNIVERSITY COLLEGE, TORONTO.

Montreal:

PRINTED BY JOHN LOVELL, ST. NICHOLAS STREET.
1874.

Washington

1864

MR ROBERT BELL CHASE

1864

DEPARTMENT OF COMMERCE

WASHINGTON

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Testimonials.

From W. S. M. D'URBAN, F.L.S., 1st Class certificated Teacher of the Science and Art Department, Curator of the Albert Memorial Museum, and Author of numerous Essays on Natural History.

EXETER, 13th April, 1874.

MY DEAR PROF. BELL,

It gives me much pleasure to bear my humble testimony to your peculiar fitness for appointment to the Chair of Natural History in University College, Toronto, to which, I understand, you desire to attain. It is now seventeen years since we served together on the Geological Survey of Canada, and I then had an opportunity of seeing your zeal in the cause of Natural Science, and your indefatigable industry in working out the observations you had made in the field, in Zoology and Botany as well as in Geology. I am aware how much you profited at that time by the lectures at McGill College, under its distinguished Principal, Professor Dawson, and the admirable training you received from Sir William Logan, and the other able men who performed the work of the Geological Survey. Since those days you have had most extraordinary opportunities, in your numerous and extensive explorations, of becoming acquainted with every branch of Canadian Natural History.

You have also paid several visits to Europe, and have thus been enabled to keep yourself informed as to the progress of Science, besides having studied at Edinburgh under such eminent men as Dr. Allman, in Zoology, and Prof. Balfour, in Botany. Your six years' work in lecturing on the Natural Sciences, and in conducting examinations in them, in Queen's

College, Kingston, must have given you great experience in such work.

I can only hope you will be successful in obtaining the object of your desires, and I am sure that, if you still manifest the same genial disposition which characterized you in our pleasant intercourse in by-gone days, your students and all who come in contact with you will have much cause of satisfaction at your appointment.

Very truly yours,

W. S. M. D'URBAN.

From Sir GEORGE DUNCAN GIBB, Bart. of Falkland and of Carribber, M.A., M.D., LL.D., F.G.S., Member of many Academies and Societies in various parts of Europe and America, for many years the principal Naturalist in Canada, Author of numerous works on Medicine, History and Natural Science.

1 BRYANSTON STREET, PORTMAN SQUARE,

LONDON, W., April 27th, 1874.

I have had some years' personal acquaintance with Mr. Robert Bell, who is a candidate for the Chair of Natural History in the University of Toronto, and I would humbly venture to recommend him most strongly for this office. He has had extraordinary opportunities for studying Canadian Natural History during the seventeen years of his connection with the Geological Survey of Canada, which permitted him to travel about annually almost everywhere from Newfoundland to the Rocky Mountains. The knowledge thus obtained peculiarly fits him, above all others, for the appointment he now seeks. His published Reports and Essays, moreover, in connection with the Survey, have made his name well known to every student of Natural History in the Mother Country, who will hail his election with great pleasure.

G. DUNCAN GIBB, Bart.

From JOHN HUTTON BALFOUR, M.A., M.D., Professor of Botany and Dean of the Faculty of Medicine in the University of Edinburgh, Keeper of the Royal Botanic Garden, Author of many works on Botany.

ROYAL BOTANIC GARDEN,
EDINBURGH, 26th March, 1874.

Professor Robert Bell attended my class of Botany in 1864, and since that time has joined in several of my botanical excursions. He has lectured on the subject with ability and success. I consider him to be a zealous cultivator of science.

J. H. BALFOUR, M.D.,
Prof. of Botany.

From ARCHIBALD GEIKIE, LL.D., F.R.S., Murchison Professor of Geology and Mineralogy in the University of Edinburgh, and Director of the Geological Survey of Scotland.

UNIVERSITY OF EDINBURGH, 9th April, 1874.

MY DEAR SIR,

You have asked me to give you my estimate of your abilities for the vacant Natural History Chair in Toronto, and I do so with the greatest pleasure. Your name is well-known among the geologists of this country as that of a most intrepid and skilful observer, and one, too, who can describe well what he has seen. Of the range of your acquirements your published papers form the best evidence. I will bear my testimony only to those which I have myself studied, and I can cordially speak of their great value.

That you would become a most successful teacher of what you have so long and so ably studied in the field I cannot doubt. I, therefore, wish you all success in your candidature. If you gain your object, I do not know whether more to regret your loss to the Canadian Geological Survey, or to congratulate University College on its gaining so able a Professor as yourself.

I am, yours very truly,
ARCHD. GEIKIE, LL.D., F.R.S.

From GEORGE FREDERICK ARMSTRONG, M.A., (*Cantab.*), C.E.,
F.G.S., *Professor of Civil Engineering in McGill College,*
Montreal.

MCGILL COLLEGE, MONTREAL, 7th April, 1874.

I have much pleasure in bearing testimony to the ability and attainments of Mr. Robert Bell, F.G.S., of the Geological Survey of Canada, and formerly Professor of Natural History in Queen's University, Kingston, in view of his candidateship for the corresponding Chair in the University of Toronto.

I have had the privilege of knowing Mr. Bell intimately for the last three years, and beg to say that, on all those points on which my opinion can be worth anything, I feel his fitness for the office he now seeks, and heartily wish him success, both for his own sake and that of the University.

GEO. FRED. ARMSTRONG.

From DONALD MACLEAN, M.D. (*Edinburgh*) *Professor of Surgery in the State University of Michigan, formerly Professor of Physiology in Queen's University, Author of various Essays on Medicine and Surgery.*

UNIVERSITY OF MICHIGAN, March 19th, 1874.

DEAR MR. BELL,

I am very happy to hear that you are a candidate for the Chair of Natural History in Toronto, and if my humble testimony can do you any good, you are more than welcome to it.

Knowing, as I do from personal observation, the energy, ability and courage which you displayed at Queen's College during your professorship there, under circumstances which would have disheartened any *common* man, I have always believed that you possessed all the requirements of a great teacher, and that any institution would be fortunate in securing your services.

I am very sure that there is not another man in Ontario who has enjoyed such educational advantages, or who has had so much *actual experience* as you have; and for its own sake, as well as for yours, I sincerely hope that University College will accept your services.

Yours truly, DONALD MACLEAN.

*From T. STERRY HUNT, LL.D., F.R.S., Professor of Geology
in the Massachusetts School of Technology, formerly Chemist
and Mineralogist to the Geological Survey of Canada,
one of the Officers of the Legion of Honor of France.*

MY DEAR PROF. BELL,

I learn with pleasure that you are to be a candidate for the Chair of Natural History in University College, Toronto, about to be left vacant by the resignation of Professor Alleyne Nicholson. Having known you in your early youth, and later as a student in the Engineering, and subsequently in the Medical Department of McGill University, I am aware with what zeal and industry you have pursued Natural History Studies; more especially during the many years that you were connected with the Geological Survey of Canada, of which I was so long a member.

The advantages which you have since had of studying both Botany and Zoology in Edinburgh, and your opportunities of intercourse with scientific men on both sides of the Atlantic, have done much to fit you for the position which you now seek as a teacher of these sciences in which you have already had some years of experience in Queen's College, Kingston.

Besides this, it should be added that your many years of field-work, in connection with the Geological Survey, have given you opportunities, which you have not neglected, for becoming acquainted with the Fauna and Flora of your native Country.

I feel confident that, if chosen to this post, you will both do honor to yourself and excellent service as a teacher of Natural History in the University of your native Province.

I remain, my dear Prof. Bell,

With best wishes for your success,

Very sincerely yours,

T. STERRY HUNT, LL.D., F.R.S.

From J. F. WHITEAVES, Esq., F.G.S., Honorary Member of
the Ashmolean Society, Oxford, Scientific Curator to the
Montreal Natural History Society.

NATURAL HISTORY SOCIETY'S MUSEUM,

MONTREAL, May 27th, 1874.

Having known Prof. R. BELL for fifteen years, I feel confident that, should he be elected to the Chair of Natural History in University College, for which he is a candidate, he would fill it with great advantage to the College and with much credit to himself.

Many valuable papers from his pen on different branches of Canadian Zoology and Geology have been read before the Natural History Society of Montreal: most of these have been printed either in Reports of the Geological Survey, or in the *Canadian Naturalist*. He has also long served as a member of council and of committees of this Society; has for the last ten years given one of its Somerville course of lectures almost every session, always to large and attentive audiences, and has materially aided in creating or fostering a love of Natural History in this city.

His papers on the Mollusca of the Dominion are cited with approbation by the most eminent writers on that group of animals, in the United States, and at the dates when they were written, contained the fullest information extant on the subject.

As an original explorer on behalf of the Geological Survey of Canada, Prof. Bell has had peculiar facilities for acquiring a practical knowledge of Canadian plants and animals, which would enable him to make his lectures singularly attractive and useful to his students.

Having previously occupied the chair of Natural History at Queen's College, Kingston, for several years, he has had considerable experience in a similar sphere of usefulness; and besides this he is well known in Montreal as a very successful teacher of and lecturer on his favorite departments of Science.

In conclusion, having devoted my whole time to similar studies and more particularly during the last fourteen years, to Canadian

Zoology, Geology and Botany, as Scientific Curator to the Natural History Society of Montreal, I gladly take this opportunity to testify to Prof. Bell's attainments in each of these subjects.

J. F. WHITEAVES.

From J. A. GRANT, M.D., F.R.C.S., Edin., F.G.S.

OTTAWA, May 27th, 1874.

Having learned that Professor Bell is an applicant for the Chair of Natural History in the Toronto University, I have much pleasure in testifying that I consider him well qualified to fill that position.

He has been a most active and successful student of Natural History for fifteen years to my knowledge, and fully twelve years ago was successful in obtaining the first prize for the best collection of Fresh Water Shells, from the Ottawa Mechanics' Institute. In connection with the Geological Survey of Canada, Prof. Bell has rendered valuable service to the country by his explorations and scientific discoveries.

Few Canadians have done more in a scientific way for the Dominion, and it is now high time that native talent and marked ability combined should receive encouragement from the institutions destined to give this new country of ours a name and a reputation.

J. A. GRANT, F.R.C.S., Ed.

From the VERY REV. JOHN JENKINS, D.D., Minister of St. Paul's Church, Montreal, Chairman of the Protestant Board of School Commissioners, author of an exhaustive treatise on Education in Lower Canada, one of the Trustees of Queen's College.

MONTREAL, May 28th, 1874.

I have long known Professor Bell, C.E., F.G.S., and have pleasure in testifying to his general excellence of character, and to the gentlemanliness of his bearing. For the post which he is desirous

of filling in University College, Toronto, I deem him peculiarly fitted. This judgment is based mainly upon the opinions respecting Professor Bell which have been formed by many eminent scientists in Canada and by some also in Great Britain. Certainly he has won for himself a name of undoubted eminence as a student of Natural History. I trust he may be successful in his application.

JOHN JENKINS, D.D.

From E. BILLINGS, Esq., F. G. S., Palæontologist to the Geological Survey of Canada. Founder of the *Canadian Naturalist and Geologist*.

MUSEUM OF THE GEOLOGICAL SURVEY,

MONTREAL, May 9th, 1874.

Having been informed that Mr. Robert Bell of this survey, intends being a candidate for the Chair of Natural History in University College, I have great pleasure in giving him my best recommendation for the position. I have known Mr. Bell intimately for nearly twenty years, and during all that time he has shewn a steady devotion to Natural Science, proving that his heart is in his work. Although still a young man he has now been connected with the Geological Survey for a period of seventeen years. * But even before that time his instinctive love of Natural History had shewn itself and he had made a considerable collection of zoological specimens. I recollect that in 1855, when the Mechanic's Institute of Bytown offered premiums (amongst other things) for the best collection of the Mollusca of the Ottawa Valley, Mr. Bell's was successful in obtaining the first prize.

In addition to the regular work in which Mr. Bell has been engaged on the Survey, during each summer, he has made copious notes on the Natural History of the districts he has examined and brought home collections for study during the winter. His published catalogues of the plants and animals of outlying parts of Canada and the papers which he has read

before the Natural History Society of Montreal are important additions to our knowledge of the fauna and flora of this country.

Mr. Bell is not only an original worker in science, but an experienced teacher of Botany and Zoology. A knowledge of the Natural History of Canada such as he possesses is not acquired in a day; and he will, therefore, be able to make his subjects much more interesting to his students than one who has not had such rare opportunities of becoming well acquainted with our native plants and animals.

As the scientific positions of emolument which Canada has to offer are but few, I share the opinion held by Canadian naturalists generally, that whenever possible, these positions should be given to natives of the country by way of encouragement to others.

Mr. Bell is by birth, education and sympathies, a thorough Canadian and the varied qualifications which he possesses, to fit him for the Chair of Natural History in University College, are not combined in any other person that I know of. I may add that he is possessed of energy, prudence and tact and all those social and personal qualities which will render him a valuable acquisition to University College and the city of Toronto.

E. BILLINGS.

Palæontologist, G. S. C.

From DR. DAWSON, F.R.S., F.G.S., *Principal and Professor of Geology and Natural History, McGill University.*

MCGILL UNIVERSITY, MONTREAL, *March 14th, 1874.*

I have much pleasure in stating, with reference to the candidature of Mr. R. Bell, F.G.S., C.E., for the Chair of Natural History in University College, Toronto, that Mr. Bell attended my lectures in 1860-1861 as a student in the Science course of this University, and took first-class honours in Natural Science in graduating in Engineering; that he has since

that time been employed in practical work in Geology and Natural History, in connection with the Geological Survey of Canada, and has also been successfully engaged in lecturing in Natural History in Queen's College, Kingston.

Mr. Bell has distinguished himself by energy and capacity in the employments in which he has hitherto been engaged, and has collected an amount of knowledge and information, as to the structure and productions of various parts of this country, which must be eminently useful to him in communicating instruction to students.

J. W. DAWSON, LL.D., F.R.S.,
Principal McGill University.

From SIR WILLIAM E. LOGAN, LL.D., F.R.S.

Understanding that Professor Robert Bell, at present on the staff of the Geological Survey of the Dominion, is a candidate for the Chair of Natural History in the University of Toronto, I have pleasure in stating that he is, in my opinion, well qualified to discharge the duties of the position.

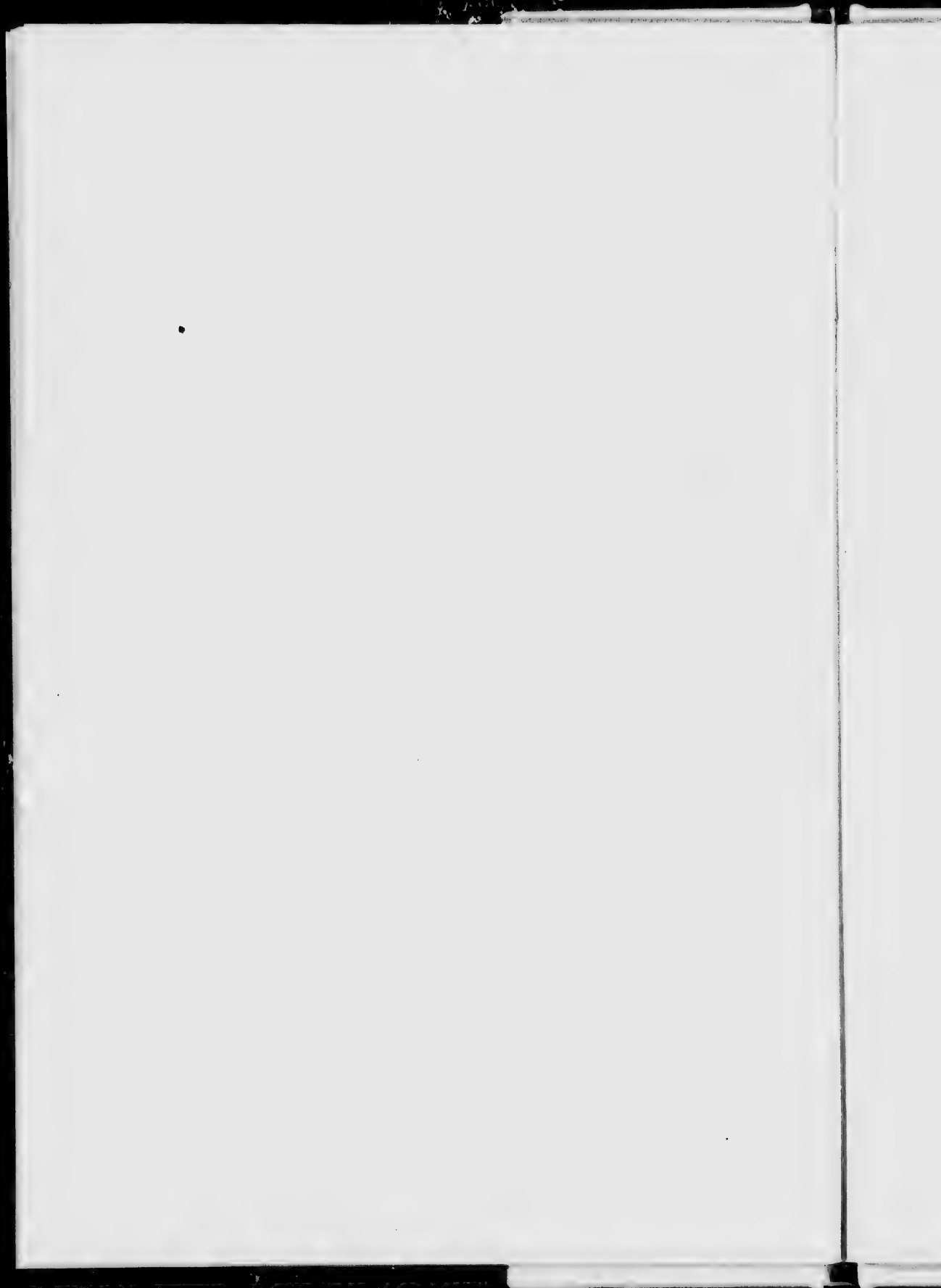
After passing through a course of studies at the McGill College, Montreal, to fit him for the career of a Civil Engineer, he went to Edinburgh and studied Chemistry under Dr. Lyon Playfair, Zoology under Dr. Allman, and Botany under Professor Balfour, thus qualifying himself for the Chair of Chemistry and Natural History in Queen's College, Kingston, where he taught for several years.

Professor Bell has for many years been on the staff of the Geological Survey, but he has never failed to prosecute his Natural History studies. Using the opportunities afforded him in his field-work, he has made valuable collections of plants and animals, thus rendering himself well acquainted with the fauna and flora of the country; and, should he be appointed to the chair to which he aspires, I am persuaded he will do credit to himself and to the University of Toronto.

W. E. LOGAN.

Montreal, 21st March, 1874.

*Copy of Testimonials in favor of the appointment of Mr. Robert Bell
to the Chair of Natural History and Chemistry in Queen's
University, Kingston, in 1864.*



COPY OF TESTIMONIALS.

From J. W. DAWSON, LL.D., F.R.S., F.G.S., Principal, and Professor of Natural History, McGill University.

MONTREAL, January 28th, 1864.

I hereby certify that Mr. ROBERT BELL, while matriculated as a student in the course of Civil Engineering of this University, attended my lectures in Natural History, including Geology; and, at the close of his course, took honors of the first rank in the subject. Mr. BELL was at all times a diligent student, and showed much aptitude for the study of Natural History. Since his graduation he has successfully engaged in original investigations in Geology and other departments of Natural History, and has had some experience in teaching the subject.

I anticipate much from his future career as a Naturalist, and have much pleasure in recommending him as competent to give instruction to students, or to undertake original researches in the subject.

J. W. DAWSON, LL.D., F.R.S.

From E. J. CHAPMAN, Esq., LL.D., Ph.D., Professor of Mineralogy and Geology University College, Toronto.

Understanding that Mr. ROBERT BELL is a candidate for the vacant Chair of Chemistry and Natural History in Queen's College, Kingston, I have great pleasure in expressing my belief that he is well fitted for the post. His knowledge of the Natural History of Canada is very extensive; and he has undergone good training, and enjoyed unusual advantages, during his connection with McGill College, Montreal, and with the Geological Survey of Canada.

Three years ago, I stated, in a short notice of one of Mr. BELL's publications, that I believed him destined to occupy a distinguished place amongst Canadian naturalists; and his subsequent career has gone far to confirm this view. From what I have heard, moreover, of Mr. BELL's method of imparting instruction, I feel sure that if he obtain the appointment for which he is now an applicant, he will prove a most desirable acquisition to the College.

EDWARD J. CHAPMAN.

UNIVERSITY COLLEGE, TORONTO,

February 4th, 1864.

From Sir W. E. LOGAN, LL.D., F.R.S., F.G.S., Director of the Geological Survey of Canada.

GEOLOGICAL SURVEY OFFICE,

MONTREAL, 1st February, 1864.

MY DEAR MR. BELL,

As your present appointment in Queen's College is only *ad interim*, and I may possibly be absent when the Directors of the University may take into consideration whether it is to be made permanent, I am desirous of recording my opinion as

to your fitness for the position, in order that it may serve as a testimonial in your favor, when the occasion may arise.

It gives me much pleasure to state that from the period at which you joined the Survey, seven years ago, up to the present time, you have displayed a uniform steady perseverance in the prosecution of those studies connected with geological science, which have rendered you skilful, both in observing in the field, and imparting instruction in the cabinet. You have as yet scarcely lived long enough to be equally practical in all the branches of science which you may be called upon to attend to in the professorial chair; but in your geological explorations, it has been a part of your duty, successfully performed, to collect, name and classify botanical specimens; while mineral species have of necessity been constantly before you. You have not, on the Survey, been called upon to practice chemical analyses; but generally grounded in the theory of Chemistry your ability and industry, your earnest scientific spirit, and your desire to excel in whatever you undertake, will soon enable you to overcome difficulties in this branch, should they occur.

Some, while admitting your ability, may hesitate to pronounce in your favor in consequence of your youth; but I have not considered you too young to entrust you with the independent control of the funds and men, necessary for distant explorations; and I have every reason to be satisfied with your prudent and economical management, and with the scientific results of your investigations, which have in every instance, greatly advanced our knowledge of Canadian Geology.

I am aware that you have already been successful in teaching Geology and its accessories in private classes, and should your position in Queen's College be made permanent, I am convinced that neither those who recommend nor those who appoint you, will have cause to regret what they have said or done in your favor.

I am, my dear Mr. BELL,

Very truly yours.

W. E. LOGAN.

From ALEXANDER MURRAY, Esquire, F.G.S., Assistant Provincial Geologist.

LOGAN'S FARM, MONTREAL,

January 26th, 1864.

MY DEAR BELL—

In answer to your note of 23rd inst., I can only say that I wish you every success in your vocation at Queen's College, not only as having been a fellow-worker on the Geological Survey, but also on your own personal account.

I can without hesitation, on my own experience, testify to your being an admirable observer in geological exploration, and also as being careful and minute in the illustration of geological details. And I would further state that, since I have known you, you have always displayed a great amount of energy, industry, and perseverance, on whatever subject you happened to be engaged, accompanied by a wholesome show of praiseworthy ambition.

With many good wishes,

Believe me,

Very truly yours

ALEX. MURRAY.

From E. BILLINGS, Esquire, F.G.S., Palæontologist to the Geological Survey of Canada, and founder of the *Canadian Naturalist and Geologist*.

MONTREAL, 1st February, 1864.

MY DEAR MR. BELL,

Understanding that you are an applicant for the permanent appointment to the Chair of Chemistry and Natural Sciences in Queen's College, I have much pleasure in testifying to what I know of your qualifications.

About seven years ago you became attached to the Geological Survey, and applied yourself with so much zeal, intelligence and perseverance to the study of the several branches of Natural Science, necessary to be understood by a Geologist, that you soon became competent to undertake the prosecution of important original explorations. I am aware that you executed your work in such a manner as to give satisfaction.

As your labors have been, to a considerable extent, connected with the department in which I am engaged, I can certify that you have a good, sound and practical knowledge of Natural History. And, as in all probability, the greater number of your pupils will be those who intend to remain in the country after leaving college, the information you are capable of imparting must be the more valuable that it has been principally accumulated in a Canadian field (so to speak), and is the result of your personal observations in different and widely separated portions of the Province, from Cape Gaspé to Lake Superior.

You have made extensive collections in all the formations of Canadian rocks, and are qualified to give that amount of instruction in Palæontology usually taught in colleges—sufficient to serve the purpose of any well-educated gentleman, and also sufficient to prepare any student, who may be desirous of proceeding further, to enter upon the long course of private in-door and out-of-door studies by which alone the specialties of this science can be mastered.

You have already had some experience in teaching Natural History and Geology in Montreal, and I am aware that your appointment as Lecturer in Morrin College was thought a good one for that Institution.

I need not speak of your private personal character, which is well known to be quite unexceptionable.

In conclusion, I may state that if I had a young friend to educate, I would gladly place him in your charge, and shall not hesitate to recommend others to do the same.

Yours very sincerely,

E. BILLINGS.

From the Rev. JOHN COOK, D.D., Principal of Morrin College, in reply to a telegram from Mr. BELL requesting to be released from his engagement as lecturer in Morrin College, Quebec.

DEAR SIR,

Morrin College will not stand in the way of your advancement, though we are very sorry to lose your services this winter.

Yours truly,

JOHN COOK.

31st Oct., 1863.

ROBERT BELL, Esq.,
&c., &c.

From WM. NOTMAN, Esq., M.P.P., Queen's Counsel, &c.

DUNDAS, 8th February, 1864.

MY DEAR SIR,

I hear you intend being a candidate for the Chair of Chemistry and Natural History in Queen's College, and sincerely trust you may be successful in your application. Although not old in years, you have displayed a degree of talent and ability of which older heads might be proud. Your contributions made at various times to the Provincial Geological Reports, speak well of the research and deep study you have devoted to the cause of science.

During my parliamentary residence at Quebec, I have heard among my brother members, your name, as to talent and achievement in the most flattering terms. Your connection with the Provincial Survey and association for so long a time with that eminent man, Sir WILLIAM LOGAN, have given you many superior advantages which others have not had, and no doubt would much tend to your benefit.

Should you succeed to the high position you aspire to, I shall be happy to hear that you have been selected, and feel confident that you will be quite competent to discharge, in an able and satisfactory manner, the duties devolving upon you.

Sincerely yours,

MR. ROBERT BELL.

WM. NOTMAN.

From WILLIAM E. BULLOCK, Esq., B. A., Chapman Medallist, McGill University.

MONTREAL, Feb. 6, 1864.

Governors of Queen's College :

GENTLEMEN,

I am informed that Mr. ROBERT BELL, a graduate of McGill University, has been spoken of in connection with the Professorship of Chemistry and Natural History in your College.

I was a fellow student of Mr. BELL's, and remember that he had the reputation of being the best student in Natural Science that had ever been at the University, and his subsequent honorable connection with Sir WM. LOGAN and the Geological Survey has fully established that reputation.

At graduation, first rank honors were awarded to him, and also the prize in Engineering. In the third year's ordinary Mathematics and Natural Philosophy he was also ranked in the first class.

From what I know of Mr. BELL's ability, discretion, and persevering activity, I should expect him to be eminently successful in any position which he would be willing to accept.

Yours truly,

WM. E. BULLOCK.

From the Reverend WILLIAM SNODGRASS, Minister of St. Paul's Church, Montreal.*

With Mr. ROBERT BELL, acting Professor of Natural History and Chemistry in the University of Queen's College, Kingston, I have been acquainted for a number of years, during several of which he sat regularly, while resident in Montreal, in the Church of which I am Minister. It gives me very great pleasure to express the high opinion I have formed of his attainments, studious habits, genial disposition, and moral character.

* Now Principal of Queen's College.

Others, whose testimony will have weight, will certify his familiarity with the subjects pertaining to the Professorship, to the permanent occupancy of which he aspires. In his fitness for the office I have the fullest confidence.

W. SNODGRASS.

THE MANSE OF ST. PAUL'S,

MONTREAL, 3rd February, 1864.

FROM ROBERT CRAIK, Esquire, M.D., Professor of Clinical Surgery, University of McGill College.

McGILL COLLEGE,

MONTREAL, 3rd February, 1864.

To the Governors and Trustees of the University of Queen's College, Kingston:

GENTLEMEN,

Having been informed that my friend Mr. ROBERT BELL is about to apply for permanent appointment to the chair which he now holds as "interim professor" in Queen's College, I have much pleasure in testifying to his entire fitness for the office.

I have been intimately acquainted with Mr. BELL for a number of years and have had ample opportunities of judging of his capabilities and acquirements, and I have no hesitation in declaring them to be of a high order.

Of his chemical acquirements I can speak in high terms. He followed the full sessional course of Chemistry in this University in 1858-59 under PROFESSOR SUTHERLAND, and he has since enjoyed excellent facilities for perfecting himself in the science.

During a number of years, when I officiated as Curator of the Natural History Society's Museum in this city, and particularly during the two years ending in May, 1863, the Society was indebted to Mr. BELL for much and valuable assistance in arranging and classifying the specimens, contributing valuable papers at the monthly meetings, &c., &c.; and I may mention incidentally, that the Council of the Society, through me, endeavored to secure the services of Mr. BELL to re-arrange and label their whole collection.

In conclusion, I would beg respectfully to remark, that Mr. BELL's clear and logical habit of thought, together with his well known zeal and industry, cannot fail to render him a most useful man in whatever station of life he may be called upon to fill.

I remain, Gentlemen,

Yours most respectfully,

ROBERT CRAIK.

FROM ALEXANDER JOHNSON, M.A., LL.D., Professor of Mathematics and Natural Philosophy, McGill University.

McGILL COLLEGE,

January 29th, 1864.

I hereby certify that Mr. ROBERT BELL, Graduate in Civil Engineering of this University, attended the lectures and passed the examinations in Mathematics and

Natural Philosophy required for that degree. I have much pleasure in adding that I had every reason to be satisfied with his attention, industry, and success in the pursuit of his studies.

I entertain a high opinion of his talents, and feel confident that they, combined with his other good qualities, will secure him a good position in the world.

His moral conduct and principles were, as far as my opportunities of observation extended, irreproachable, and his manners were such as to win respect and regard. These opinions of mine, formed during his College course, have been confirmed by further acquaintance with him, which, arising then, has been continued to the present time.

I heartily wish him that success in life which I am sure he deserves.

ALEXANDER JOHNSON.

From Rev. A. F. KEMP, M.A., Minister of St. Gabriel Street Church, Montreal,
one of the Editors of the *Canadian Naturalist and Geologist*.

MONTREAL, 6th February, 1864.

I have known Mr. ROBERT BELL for now several years, and had an opportunity of witnessing his successful devotion to Natural Science while he was engaged under Sir WILLIAM LOGAN as an assistant in the Geological Survey of Canada. Although during that time his attention was specially directed to the department of Geology, in which he acquired great proficiency, he yet took every opportunity of investigating the Zoology and Botany of the districts of country which from time to time he visited. His collections of the Fauna and Flora of many comparatively unknown portions of Canada manifest a measure of enthusiasm and careful observation, and marked him out as possessing natural talents as well as acquired gifts for the acquisition of a thorough knowledge of the most difficult of the Natural Sciences.

I have also had opportunities as a member of the Council of the Natural History Society of Montreal, and one of the Editors of the *Canadian Naturalist*, of carefully examining papers on Natural Science contributed by Mr. BELL, and read before that Society and published in their Journal, and can bear testimony to the thoroughness with which the topics were treated, and the simplicity, strength and clearness of his style of communicating his observations.

From the manifest inclination of Mr. BELL's mind to the pursuits of Natural Science, the time he has devoted to their study under the best teachers and with the best opportunities, the vigor and clearness of his mind, and the unimpeachable integrity of his character, I consider Mr. BELL well qualified to occupy the place of teacher of Natural Science in any of our University Colleges, and would anticipate that were he appointed to any such honorable position, he would amply justify the confidence reposed in him, and the opinion formed of his abilities and attainments.

ALEX. F. KEMP.

LIST OF REPORTS, ESSAYS AND PUBLIC LECTURES BY MR. ROBERT BELL, OF THE
GEOLOGICAL SURVEY.

1. Report on the Natural History of the Lower St. Lawrence, the Saguenay and Lake St. John. *Geological Survey Reports for 1857.*
2. Explanatory Catalogue of the Animals and Plants of the Gaspé Peninsula. *Do. for 1858.*
- 3-8. Reports on Geological Investigations in various parts of Canada from 1859 to 1863 inclusive, addressed to Sir W. E. Logan and incorporated by him in the *General Report on the Geology of Canada for 1863.*
9. Report on Grand Manitoulin Island. *Geological Survey Reports for 1865.*
10. " " Cockburn, St. Joseph's and Drummond Islands. *Do. for 1866.*
11. " " The Thunder Bay and Lake Nipigon Regions. *Do. for 1869.*
12. " " The Pic River and Long Lake Regions. *Do. for 1870.*
13. " " The Country between Lake Superior and the Albany River. *Do. for 1871.*
14. " " The Country between Lake Superior and Lake Winnipeg. *Do. for 1872.*
15. " " The Country between Red River and the South Saskatchewan. *Do. for 1873.*
16. On the Natural History of the Gulf of St. Lawrence and the Distribution of the Mollusca of Eastern Canada. *Canadian Naturalist, 1859.*
17. On the occurrence of Fresh Water Shells, in some of our Post Tertiary Deposits. *Do., 1861.*
18. List (with notes) of Recent Land and Fresh Water Shells collected around Lakes Superior and Huron in 1859-60. *Do., 1861.*
19. Catalogue (with notes) of Birds collected and observed around Lakes Superior and Huron. *Do. 1861.*
20. Catalogues of Plants collected on the south and east shores of Lake Superior and on the north shore of Lake Huron. *Annals of the Botanical Society of Canada, 1861.*
21. On the Trees and Shrubs growing around Lakes Superior and Huron. *Do., 1861.*
22. Lake Superior. *Chambers' Encyclopedia, Edin., vol. ix.*
23. On the Physical Characters, Climate and Resources of the Gaspé Peninsula. *Montreal Herald, April, 1863.*
24. On the Superficial Geology of the Gaspé Peninsula. *Canadian Naturalist, 1863.*

25. Roofing-Slate as a source of wealth to Canada. *Do.*, 1863.
26. On the Superficial Geology of Canada. *General Report, Geological Survey*, 1863.
27. Popular Lecture on Botany. *Kingston*, 1864.
28. Public Inaugural address, on Lectures as a method of Instruction. *Kingston*, 1864.
29. The Enniskillen Oil Region. Published in London, 1865.
30. On certain Chemical Manufactures which may be advantageously carried on in Canada. *Somerville Lecture*. Montreal, March, 1865.
31. On the occurrence of Petroleum in Gaspé. New York, printed by C. S. Westcott & Co., 1865.
32. On the Oil Region of Gaspé. New York, printed by John A. Gray and Green, 1865.
33. On the occurrence of Plumbago in Grenville. Printed in New York, 1866.
34. Grand Manitoulin Island. *Somerville Lecture*. Montreal, March 6th, 1866.
35. On the Geological Relations of Gold. Read before the Kingston Philosophical Society, 15th March, 1867.
36. Household Chemistry. A course of six Lectures delivered in Kingston, 1867.
37. The Geology of the Manitoulin Islands. A Lecture delivered in Kingston, 1867.
38. Canada, its Resources and People. A Lecture delivered under the auspices of the Athenæum, St. John's, Newfoundland, Feb., 1869.
39. A Visit to Newfoundland. *Toronto Globe*, 1869.
40. On the Natural History of the Nipigon Country. Read before the Natural History Society of Montreal, Feb. 28th, 1870.
41. On the Intelligence of Animals. Read before the same Society, Jan. 31st, 1870.
42. Explorations in the Nipigon Country. *Somerville Lecture*. Montreal, Feb. 10th, 1870.
43. The Indians of Canada. A Lecture delivered before the St. Gabriel Young Men's Association, March, 1870.
44. Report on a Railway Route to the North West. Transmitted to the Dominion Government, Feb. 22nd, 1870.
45. Lake Nipigon and the Route to the North West. A Lecture delivered under the auspices of the Mechanics Institute of Toronto, June 17th, 1870.
46. Annual Reviews of the Progress of Mining in Canada. *Mining Journal* of London and Annual Reports on Trade and Commerce, published in connection with the *Montreal Herald*, 1867-72.
47. The Wonders of the Glacial Period. *Somerville Lecture*. Montreal, March, 1872.
48. The Coal-Fields of Canada. A Lecture delivered in behalf of the Grand Trunk Reading Room Association, Point St. Charles, Feb. 19th, 1873.
49. On the Huronian and other Mineral-bearing Rocks of Lake Superior. Read before the Natural History Society of Montreal, Feb. 24th, 1873.

50. On Furs and the Fur-bearing Animals of Canada. *Somerville Lecture*. Montreal, Feb. 27th, 1873.
51. Coal. A Lecture delivered in the Mechanics' Hall on behalf of the Montreal Working Men's Mutual Benefit and Widows and Orphans Provident Society, March, 1873.
52. A Summer on the Plains. *Somerville Lecture*. Montreal, Feb. 19th, 1874.
53. Geology of the Provinces of Ontario and Quebec. *Walling's Atlas and Gazetteer of Canada*. Desbarats Printing and Publishing Co., Montreal, 1874.
54. A Journey from Montreal to the Saskatchewan in 1873. A Lecture delivered before the St. Gabriel Young Men's Association, Feb. 24th, 1874.